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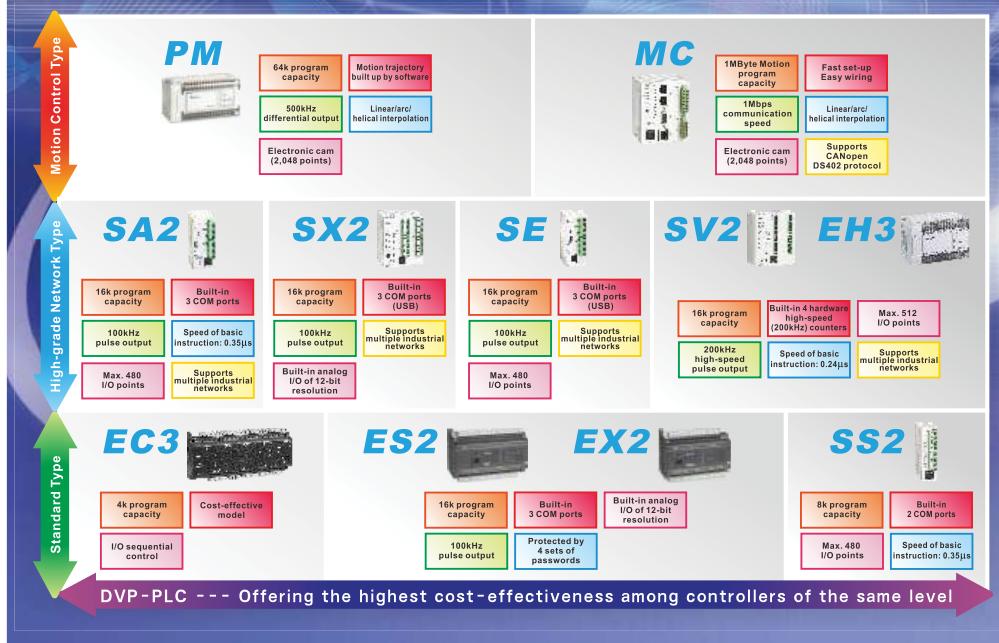


# The Perfect Small PLC Revolution!

After launching the first DVP series PLCs for industrial automation applications, Delta has devoted itself to delivering more innovative products that satisfy customers' needs and meet the requirements for a wide variety of applications.

Delta PLCs offers a broad range of controllers and modules which all feature high performance, multiple functions and efficient program editing tools. With the aid of motion control, complete network communication and direct connection to Delta's other industrial automation products, it is easy to represent a high-value and well-integrated solution for machine control and industrial automation. Delta PLCs are among the most flexible product lines in the industry that deliver the most competitive benefits for customers.

To meet the requirements of various manufacturing industries, DVP series PLCs are developed with abundant features and excellent performance. In addition to the user-friendly programming software and faster execution speed, we also provide complete industry-focused solutions, motion control solutions, and industrial fieldbus solutions with Delta's new PLC series. We integrate our PLCs with Delta's industrial automation products to deliver a total integrated solution. As a most reliable partner, Delta is dedicated to creating value for our customers.



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reddot design award  
winner 2010

## 2nd Generation Standard Type PLC DVP-ES2

**Integrated communication functions.**  
**Built-in 1 RS-232 and 2 RS-485 Ports.**

**V2.0 and later version models support real time clock and file register (5k words)**

- ▶ DVP-ES2 provides 16/20/24/32/40/60 I/O points for a variety of applications
- ▶ DVP20EX2 provides 12-bit 4 analog inputs / 2 analog outputs. With the aid of 14-bit analog input / output extension module and built-in PID auto tuning function, it offers a complete analog control solution
- ▶ Program capacity: 16k steps  
Data register: 10k words
- ▶ Higher execution speed compared to the competition: LD: 0.35 $\mu$ s, MOV: 3.4 $\mu$ s
- ▶ High efficient processing ability: 1k steps of programs can be completed within 1ms
- ▶ Max. 100kHz pulse control. Specific motion control instructions such as mark/masking and instant frequency changing are available for multi-axes applications
- ▶ Up to 4 levels of password protection secures your source programs and intellectual property.

### Built-in High-Speed Counters

1-phase 1 input	1-phase 2 inputs	2-phase 2 inputs			
Points	Bandwidth	Points	Bandwidth	Points	Bandwidth
2/6	100kHz/10kHz	2	100kHz	1/3	15kHz/5kHz

## New Member of DVP-ES2 Series

**2nd Generation Standard Type PLC with built-in CANopen interface**

**DVP32ES2-C**

**Built-in 1Mbps CANopen interface with fast execution speed of Great noise-immunity, easy wiring.**



- ▶ COM3 supports standard CANopen DS301 protocol
- ▶ Provides versatile communication types: PDO, SDO, synchronous (SYNC), Emergency, NMT and many more
- ▶ 1Mbps high speed transmission for large data  
Maximum PDO receiving up to 390 bytes  
Maximum PDO transmitting up to 390 bytes
- ▶ Ability to connect with 16 slaves via CANopen
- ▶ CANopen Builder software is used to construct slave nodes



## New Member of DVP-EX2 Series

**2nd Generation Temperature/Analog I/O PLC**

**DVP30EX2**

**Integrated controller able to control temperature and analog input**

- ▶ Built-in 16-bit 3 analog inputs / 3 analog outputs.
- ▶ With built-in PID auto tuning function, it offers a complete analog control solution.
- ▶ Provides 3 analog inputs for PT100/NI temperature input, precision of 0.1 degree can be readily achieved.
- ▶ Suitable for the specific industries that require temperature and analog input control such as boiler industries and HVAC

### Built-in Analog I/O in EX2 Model

Analog Input		Analog Output	
Points	1	Points	1
Resolution	16-bit	Resolution	12-bit
Spec.	-20~20mA or -10~10V	Spec.	0~20mA or -10~10V

### Built-in temperature control function in DVP30EX2

Sensor	PT100/PT1000	NI100/NI1000
Temperature Range	-200°C~800°C	-100°C~180°C
Value Range	-2000~8000	-1000~1800

## Basic Type DVP-EC3

**Applicable for sequence control and simple RS-485/MODBUS communication**

- ▶ Built-in I/O: 10/14/16/20/24/30/32/40/60
- ▶ Program capacity: 4K steps
- ▶ COM port: Built-in RS-232 & RS-485 ports (10/14/30-point models do not support RS-485), compatible with MODBUS ASCII/RTU protocol
- ▶ Supports 2 points (Y0, Y1) of independent high-speed (max. 10kHz) pulse output

### Built-in High-Speed Counters

1-phase 1 input	1-phase 2 inputs	2-phase 2 inputs			
Points	Bandwidth	Points	Bandwidth	Points	Bandwidth
2/6	20kHz/10kHz	1	20kHz	1	4kHz



## High Performance PLC

### DVP-EH3

The new generation DVP-EH3 PLC is the high-end model of the Delta DVP-E series. It provides larger program capacity and data registers for more demanding and complex applications

Program capacity	Data register	Execution speed
EH3	EH3	EH3
30k steps	12,000 words	4X
EH2	EH2	EH2
16k steps	10,000 words	1X

#### Excellent Motion Control

- High-speed pulse output: 4 sets of 200kHz pulse output (40 I/O points DVP-EH3-T models only)
- Supports max. 4 hardware 200kHz high-speed counters
- Increases many motion control instructions to meet the applications that require high-speed and high-precision positioning control such as labeling machines, packaging machines and printing machines
- Offers linear / arc interpolation motion control
- Provides up to 16 external interrupt pointers

#### Complete Program Protection

- Auto backup function to prevent losing programs and data even when the battery runs out
- Second copy function provides a backup for extra insurance in the event that one set of programs and data are damaged
- Up to 4-level password protection protects your source programs and intellectual property

#### Built-in 4 Hardware High-Speed Counters

Standard		Hardware high-speed counter			
1-phase 1 input	1-phase 1 input	1-phase 2 inputs	2-phase 2 inputs	Points	Bandwidth
Points	Bandwidth	Points	Bandwidth	Points	Bandwidth
6	10kHz	2/2	200kHz/20kHz	2/2	200kHz/20kHz

#### Outstanding Operation Performance

CPU + ASIC dual processors support floating point operations. The max. execution speed of basic instructions is able to reach 0.24μs.

#### Flexible Function Extension Modules & Cards

The multiple selections of extension modules and function cards provide analog I/O, temperature measurement, additional single-axis motion control, high-speed counting, 3rd serial communication port and Ethernet communication card are available.

#### PLC-Link

PLC-Link allows the user to link up a max. 32 units to the network without having to install extra communication extension modules.

#### Brand-New High-Speed Extension Modules

The brand-new extension modules greatly shorten the data transmission time among the MPU and its extension modules as well as enhance the efficiency of the MPU program.

## High Performance Slim PLC

### DVP-SV2

The new generation DVP-SV2 PLC is the high-end model of the Delta DVP-S series. It provides larger program capacities and data registers for more demanding and complex applications

Program capacity	Data register	Execution speed
SV2	SV2	SV2
30k steps	12,000 words	4X
SV	SV	SV
16k steps	10,000 words	1X

#### Excellent Motion Control

- High-speed pulse output: 4 sets of 200kHz pulse output
- Supports max. 4 hardware 200kHz high-speed counters
- Increases many motion control instructions to meet the applications that require high-speed and high-precision positioning control such as labeling machines, packaging machines and printing machines
- Offers linear / arc interpolation motion control
- Provides up to 16 external interrupt pointers

#### Complete Program Protection

- Auto backup function to prevent losing programs and data even when the battery runs out
- Second copy function provides a backup for extra insurance in the event that one set of programs and data are damaged
- Up to 4-level password protection protects your source programs and intellectual property

**Supports DVP-S series left-side and right-side modules.**  
**Add new ETHRW instruction for Ethernet communication**

#### Built-in 4 Hardware High-Speed Counters

Standard		Hardware high-speed counter					
1-phase 1 input		1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Points	Bandwidth	Points	Bandwidth	Points	Bandwidth	Points	Bandwidth
6	10kHz	2/2	200kHz/20kHz	2/2	200kHz/20kHz	2/2	200kHz/20kHz



## 2nd Generation Standard Slim PLC DVP-SS2

### Economic and Compact PLC. Max. 480 I/O points

- Program capacity: 8k steps
- Data register: 5k words
- Higher execution speed compared to the competition: LD: 0.35μs, MOV: 3.4us
- Built-in RS-232 and RS-485 ports (Master/Slave). Supports standard MODBUS ASCII/RTU protocol and PLC Link function.

### Motion Control Functions

- 4 points of 10kHz pulse output
- 8 sets of high-speed counters: 20kHz/4 points, 10kHz/4 points

### Built-in High-Speed Counters

1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Points	Bandwidth	Points	Bandwidth	Points	Bandwidth
4/4	20kHz/10kHz	2	20kHz	2/2	10kHz/5kHz

## 2nd Generation Advanced Slim PLC DVP-SA2

### Compact PLC Specializes in Motion Control

- 4 sets of high-speed pulse output: 100kHz/2 sets, 10kHz/2 sets
- 8 sets of high-speed pulse input: 100kHz/2 sets, 10kHz/6 sets, 1 group of A/B phase 50kHz
- Supports 2-axis linear and arc interpolation
- Program capacity: 16k steps
- Data register: 10k words
- Higher execution speed compared to the competition: LD: 0.35μs, MOV: 3.4us
- Built-in 1 RS-232 and 2 RS-485 ports (Master/Slave). Supports standard MODBUS ASCII/RTU protocol and PLC Link function.
- No battery required. Maintenance-free. (Real time clock operates for 15 days after power off)
- Supports DVP-S series left-side and right-side modules

### Built-in High-Speed Counters

1-phase 1 input		1-phase 2 inputs		2-phase 2 inputs	
Points	Bandwidth	Points	Bandwidth	Points	Bandwidth
2/6	100kHz/10kHz	2	100kHz	1/3	50kHz/5kHz

## 2nd Generation Analog I/O Slim PLC DVP-SX2

### Compact PLC with Incredible Analog Function 4 Analog Inputs, 2 Analog Outputs, High Efficient PID Auto Tuning Performance

- Program capacity: 16k steps
- Data register: 10k words
- Higher execution speed compared to the competition: LD: 0.35μs, MOV: 3.4us
- Built-in mini USB, RS-232 and RS-485 ports (Master/Slave). Supports standard MODBUS ASCII/RTU protocol and PLC Link function.
- No battery required. Maintenance-free. (Real time clock operates for 15 days after power off)
- Supports DVP-S series left-side and right-side modules.

### Motion Control Functions

- 4 sets of high-speed pulse output: 100kHz/2 sets, 10kHz/2 sets
- 8 sets of high-speed pulse input: 100kHz/2 sets, 10kHz/6 sets
- Supports 2-axis linear and arc interpolation

### Built-in Analog I/O

Analog Input		Analog Output	
Points	4	Points	2
Resolution	12-bit	Resolution	12-bit
Spec.	-20~20mA or -10~10V 4~20mA	Spec.	0~20mA or -10~10V 4~20mA

## Network Type Advanced Slim PLC DVP-SE

### Most complete communication type slim PLC in the industry.

### Provides 8 digital inputs and 4 digital outputs. Built-in mini USB, Ethernet, and 2 RS-485 ports

- Program capacity: 16k steps
- Data register: 12k words
- Higher execution speed compared to the competition: LD: 0.64μs, MOV: 2μs
- Built-in Ethernet supports MODBUS TCP and Ethernet/IP
- IP Filter function is a firewall that offers the first line of defense and provides protection from malware and network threats
- Remote I/O function is suitable for distributed sequence control applications such as building automation system
- Supports DVP-S series left-side and right-side modules
- No battery required. Maintenance-free. (Real time clock operates for 15 days after power off)

## Pulse-train Motion Controller DVP-PM



### General Purpose Motion Controller

#### DVP10PM00M

**2 / 3 / 4 / 5 / 6-axis linear interpolation motion control**

**Highly accurate PWM 200kHz output, resolution 0.3%.**

**8 groups of high-speed captures (mark correction, frequency measurement), Comparative output, Mark/Mask function (for bag making)**

- ▶ Built-in 24 I/O points. Max. 256 I/O points
- ▶ Program capacity: 64k steps. Data register: 10k words
- ▶ Higher programming speed compared to the competition: LD: 0.13µs, MOV: 2.1µs
- ▶ Built-in RS-232 and RS-485 ports. Supports standard MODBUS ASCII/RTU protocol

#### Motion Control Functions

- ▶ High-speed pulse output: built-in 6 groups of A/B phase pulse outputs
- ▶ 6 groups of high-speed counters and hardware digital filter for counting
- ▶ Single-axis motion control function (supports 1st speed, 2nd speed, MPG function)
- ▶ Electronic gear function

### Professional Motion Controllers DVP20PM00D/M

**Compatible with G-Code / M-Code, 3-axis linear / arc / helical interpolation.**

**Supports electronic cam (2048 points) function for flying shear and rotary cut applications**

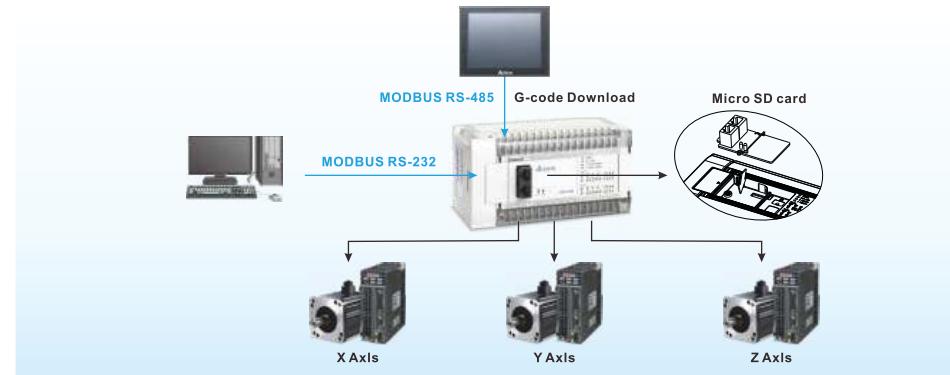
**Not only a motion controller but also an extension module.**

- ▶ Built-in 16 I/O points. Max. 512 I/O points
- ▶ Program capacity: 64k steps
- ▶ Data register: 10k words
- ▶ Built-in RS-232 and RS-485 ports. Supports standard MODBUS ASCII/RTU protocol

#### Motion Control Functions

- ▶ Built-in A/B phase differential signal outputs: 2 groups (DVP20PM00D) / 3 groups (DVP20PM00M). Max. differential output frequency is 500kHz.
- ▶ Supports MPG inputs
- ▶ Single-axis motion control function (supports 1 speed, 2 speed, MPG function)
- ▶ Electronic gear function

## DVP-PM Series High-speed Pulse-train Motion Controller



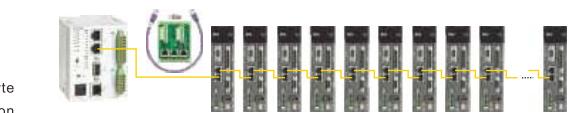
### Network Type Motion Controller

#### DVP-MC

#### CANopen Motion Controller

#### DVP10MC11T

**Up to 16 axes can be controlled through high-speed CANopen communication**  
**Provides E-Cam (2048 points), rotary cut and flying shear applications**  
**Compatible with DVP-S series left and right side modules for flexible applications**



- ▶ Built-in 12 I/O points (8 points of high-speed pulse inputs for interrupt function and 4 points of high-speed outputs)
- ▶ Max. 480 I/O points
- ▶ Program capacity : Ladder 16k steps / Motion 1Mbyte
- ▶ Built-in Ethernet, RS-232 and RS-485 communication port and standard MODBUS ASCII/RTU communication protocol
- ▶ Flexible industrial network applications (provides DeviceNet Master/Slave, CANopen Master/Slave, PROFIBUS-DP Slave and many more modules)
- ▶ Provides standard CANopen communication cables, terminal resistors, distribution boxes and related accessories. Wiring is simple and easy.
- ▶ Synchronously controls 4 axis in 2ms and 8 axis in 4ms
- ▶ Compatible with G-Code
- ▶ Supports PLCCopen standard function blocks for motion control, enhancing program editing efficiency

#### Function Cards for DVP-PM

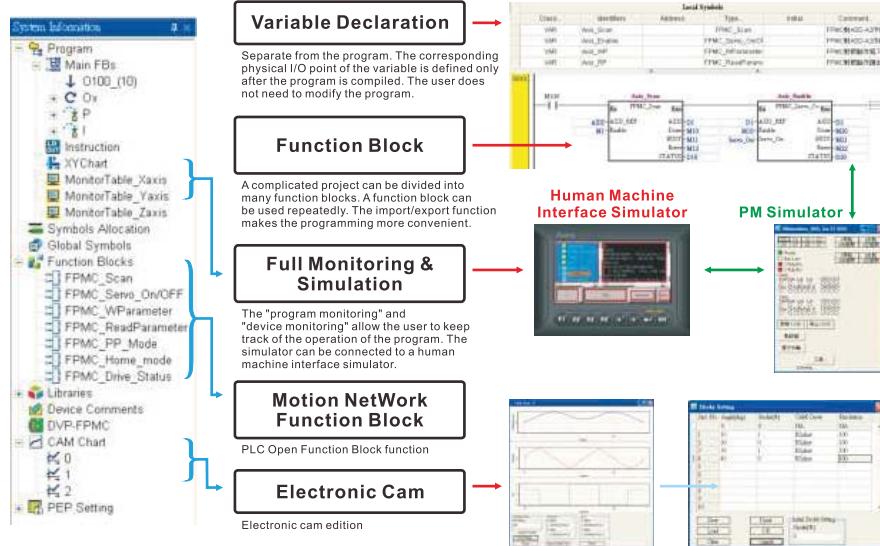
Model name	Spec.	Features
PM-PCC01	Data backup memory card	Auto read/write program
DVP-FPMC	Ethernet/CANopen communication card *Supports function cards for DVP-EH2: DVP-F2AD, DVP-F2DA, DVP-F232S, DVP-F485S	1. Complies with CANopen DS301 V4.01 protocol. 2. Supports CANopen DS402 V2.14 synchronous axes. 3. Provides high-speed upload/download of Ethernet program.

#### CANopen Accessories

Model name	Spec.	Features
TAP-CN01/02/03	Distribution Boxes	Built-in terminal resistor 12 ohm
TAP-CB01/02/03/05/10/20	CANopen communication cables	Standard Canopen Cables
TAP-TR01	Terminal Resistor	Terminal Resistor 120 Ohm

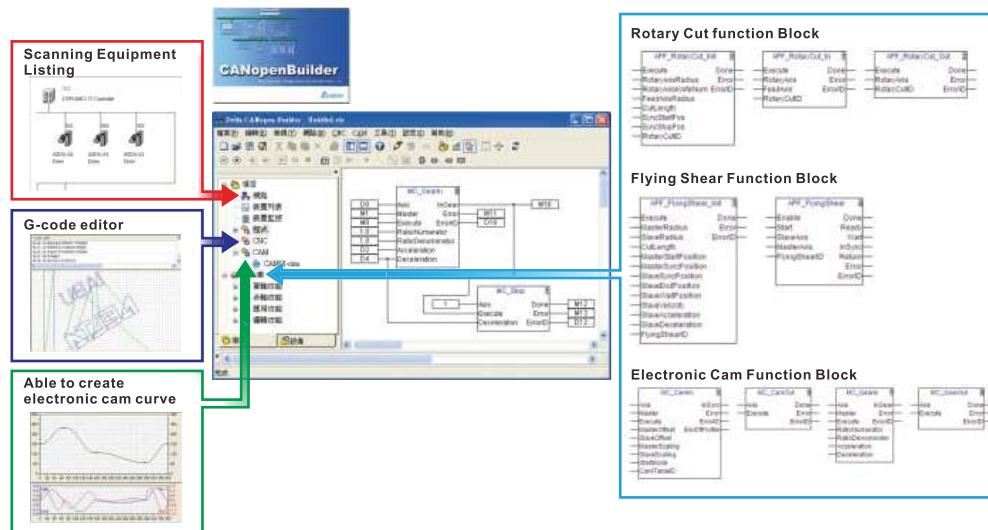
## PMSoft

The programming software for G-code editing, motion trajectory simulation, positioning route instruction and electronic cam establishment



## CANopen Builder

Available for designing CANopen networks and DVP-MC motion control programs



## Professional Motion Control Applications

Designed as the most outstanding and economical motion controller, DVP-PM provides flying shear, rotary shear, electronic cam and many high-level functions to achieve highly precise motion control.

### Robot arm

Electronic Cam (E-Cam) function enables the robot arm to perform multi-axis control. After the required positions are memorized in the PLC, users can enable the electronic cam function to create the E-Cam profile and conduct trajectory tracking and multi-axes motion control required in robot arm applications



### High-Speed Cutting Machine

Average PLC cutting motion is limited by operation speed, poor synchronization, large amount of calculations and long CPU processing time, resulting in a disproportionate cutting result and affecting the quality of end products. The basic demands, however, can be fulfilled under low speed while rough surface and low quality appear under high speed. The electronic cam function offered by DVP-PM and DVP-MC is able to generate dynamic cam curves for rotary shear to ensure precise cutting results.



### Digital Board Cutting Machine

Typically, a PLC finishes cutting with an interruption, followed by a large error. Now the rotary shear function built into the DVP-PM is able to complete all kinds of demands, such as synchronous conveyance and cutting speed, to ensure precise cutting results.

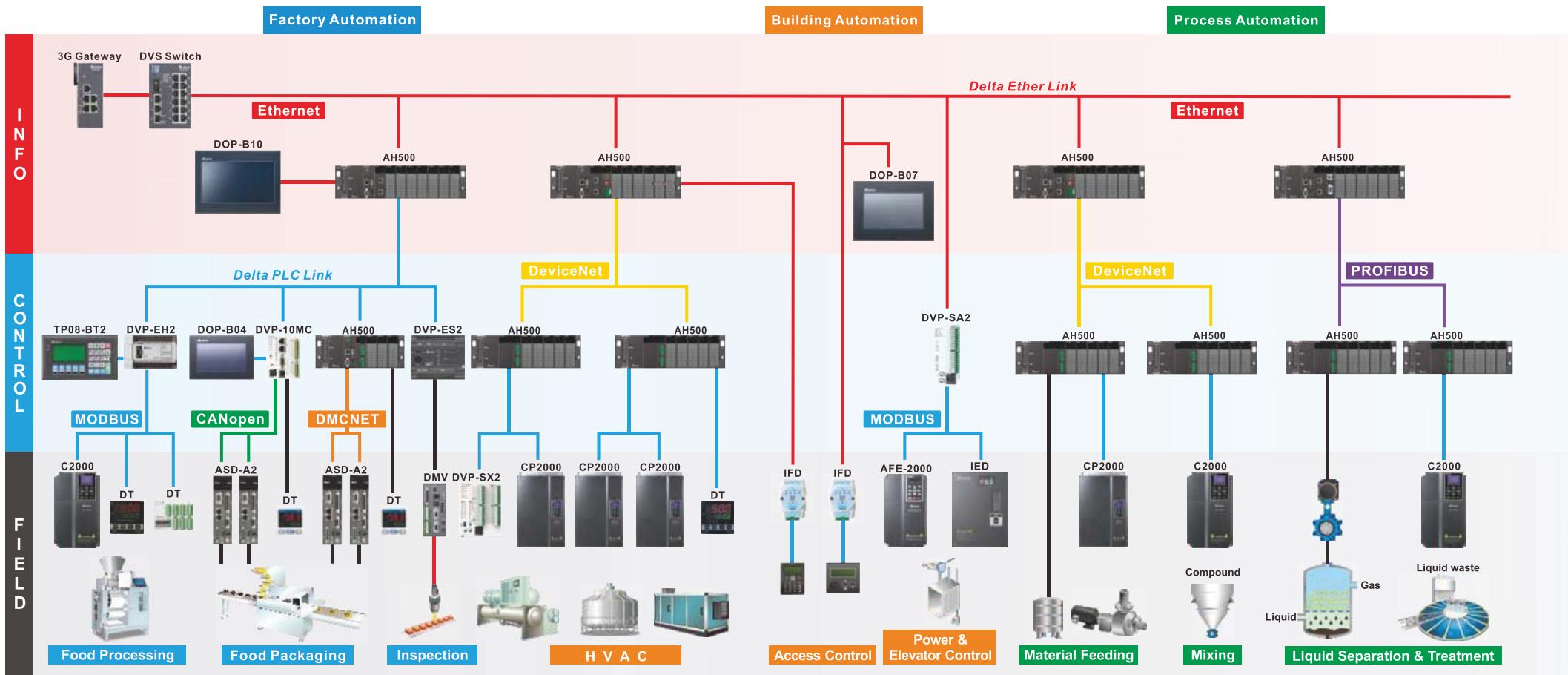


### CNC Lathe

DVP-PM controls multi-axis motion. 2-axis complete the motion by linear or arc interpolation, and the other 2 work independently, controlling the independent or synchronous ascending/descending of the vertical axis on 2 sides.



# Industrial Automation Solutions



## Ethernet

Delta Ethernet products transcend the limits of transmission distance, offering 10/100Mbps high-speed transmission and efficient remote monitoring.

## CANopen

Delta CANopen products support CANopen DS301 and DSP402 protocols, and are able to achieve multi-axis, high-speed and complex motion control with max. speed 1Mbps.

## DMCNET

Delta DMCNET offers 10Mbps communication speed, constructing a real-time control system which supports multi-axis synchronous motion. The system can be connected to servo motors, remote digital or analog I/O modules, step motors, DD motors, linear motors, MPG modules, and more.

## MODBUS

Delta MODBUS serial products integrate easily with devices of other brands, and for communication among RS-232, RS-422, RS-485 and custom-defined formats, offering greater flexibility for on-site applications.

## DeviceNet

Delta DeviceNet products support interconnections among products of different brands and wire-saving network topology. The 500kbps stable and noise resistant fieldbus data transmission is suitable for harsh industrial sites.

## PROFIBUS

Delta PROFIBUS products support 12Mbps communication speed and are suitable for distributed automated industrial control networks.



## Standard 4 Line Text Panels

### TP04G-AL-C TP04G-AL2

- 4.1" STN-LCD
- User-defined function keys available
- Supports RS-232 / RS-422 / RS-485 COM ports (TP04G-AL2)
- Password protection function available
- User-defined boot screen available
- Built-in Perpetual Calendar (RTC)

## Basic 2/4 Line Text Panels

### TP02G-AS1 TP04G-AS2

- STN LCD Size: 2.8" (TP02G), 3.0" (TP04G)
- Resolution: 160 x 32 dots (TP02G), 128 x 64 dots (TP04G)
- Built-in 256kB flash memory
- TP02 provides 16 user-defined function keys
- TP04 provides 12 user-defined function keys
- TP02 supports RS-232 and RS-485 COM ports
- TP04 supports RS-232 and RS-485 / RS-422 COM ports
- Password protection function available

## Standard Numeric Entry 4 Line Text Panel

### TP04G-BL-C

- 4.1" STN-LCD
- 0-9 numeric keys and user-defined function available
- Built-in RS-232 standard MODBUS ASCII/RTU modes
- Password protection function available
- User-defined boot screen available
- Built-in Perpetual Calendar (RTC)

## Multi-function 8 Line Text Panel

### TP08G-BT2

- 3.8" STN-LCD
- Resolution: 240 x 128 dots
- Built-in 1024kB flash memory
- 24 user-defined function keys
- Built-in RS-232 and RS-485 / RS-422 COM ports
- Supports recipes and macro functions

Dimensions	4.1" (101.8 x 35.24mm)
Resolution	192 x 64
Display color	Monochrome
Flash Memory	256k bytes
SRAM	16k/10k bytes
Function keys	10 function keys
Password	Available
Recipe function	Not available
Real-time clock	Available
Serial COM port	RS-232 & RS-422/485
Editing software	TPEditor

Dimensions	72 x 22 mm / 3" (67mm x 32 mm)
Resolution	160 x 32 / 128 x 64
Display color	Monochrome
Flash Memory	256k bytes
SRAM	32k bytes
Function keys	16 / 12 function keys
Password	Available
Recipe function	Not available
Real-time clock	Available
Serial COM port	RS-232 & RS-422/485
Editing software	TPEditor

Dimensions	4.1" (101.8 x 35.24mm)
Resolution	192 x 64
Display color	Monochrome
Flash Memory	256k bytes
SRAM	10k bytes
Function keys	17 function keys
Password	Available
Recipe function	Not available
Real-time clock	Available
Serial COM port	RS-232
Editing software	TPEditor

Dimensions	3.6" ( 83mm x 41 mm)
Resolution	160 x 80/240 x 128
Display color	Monochrome
Flash Memory	1M bytes
SRAM	64k bytes
Function keys	24 function keys
Password	Available
Recipe function	Available
Real-time clock	Available
Serial COM port	RS-232 & RS-422/485
Editing software	TPEditor

## TP Hardware Specifications

Model name		TP02G-AS1	TP04G-AS2	TP08G-BT2	TP04G-AL-C	TP04G-AL2	TP04G-BL-C			
Display specifications		STN LCD Monochrome								
Resolution	Screen type	160 x 32	128 x 64	240 x 128	192 x 64					
Backlight	Display color	Life span of backlight is about 50,000 hours at 25 °C								
Display range	Display range	72 x 22mm	3"(67 x 32mm)	3.8"(83 x 41mm)	4.1"(101.8 x 35.24mm)					
Flash memory	256k byte	1M byte		256k byte						
Program download port	COM1(RS-232)									
Serial COM port	COM1	RS-232	RS-232/422		RS-232	RS-232/422	RS-232			
	COM2	RS-485			-	RS-485	-			
Extension interface	The slot for program copy card									
Real-time clock	-	Built-in								
Auxiliary keys	System keys	6	7	12	5	7				
	Function keys	10	5	12	5	10				
Operating voltage	DC +24V (-10% ~+20%)									
Backup battery	3V lithium battery CR2032 x 1 / battery life: 5 years									
Buzzer	85dB									
Cooling method	Natural air circulation									
Operating temperature	0°C~50°C									
Storage temperature	-20°C~+60°C									
Operating humidity	10% ~ 90% RH (0~40°C)									
Vibration	IEC61131-2, IEC 68-2-6 (TEST Fc) 5Hz≤f<8.4Hz      Continuous: 3.5mm 8.4Hz≤f≤150Hz      Continuous: 1.0g									
Shock	IEC61131-2, IEC 68-2-27 (TEST Ea) 15g peak, 11ms duration, half-sine, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)									
Radiated emission	CISPR11, Class A Frequency: 30~230MHz, Limits: 40dB uV/m; Frequency: 230MHz~1GHz, Limits: 47dB uV/m									
Radiated electromagnetic field	EN61000-4-3, Frequency: 80~2000MHz, Limits: 10V/m									
Electrostatic discharge	EN61000-4-2, Air Discharge: 8KV, Contact Discharge: 4KV									
Fast transient burst	EN61000-4-4, Power Line: 1KV, Communication I/O: 500V									
Dimensions (Width (W) x Height (H) x Depth (D))	147 x 97 x 35.5	210 x 122 x 45	163.6 x 108.6 x 37							
Panel cutout	136 x 85	196 x 108	151 x 96		163 x 96	163 x 96				
Weight	240g	430g	268g	270g	292g					
Safety approvals (Waterproof class of front panel)	IP65/NEMA4 & CE, UL Type 4 indoor			IP65/NEMA4 & CE						

## Product Outline & Dimensions



## Extension Modules

**Small PLC with the Strongest Operation Efficiency!**

### DVP-EH3

- Max. 512 I/O points
- 200kHz high-speed pulse output
- Brand-new high-speed extension modules
- Supports linear/arc interpolation
- -L type supports left-side extension



#### Function Cards

■ Convert RS-485 into RS-232/422 for COM2



■ Add additional 3rd COM port



■ For Ethernet Communication



■ For CANopen Communication



■ Analog I/O



#### Accessories

■ Data Backup Card  
DVP-256FM  
(for special purpose)



DVPPCC01  
(for general purpose)



■ Data Transmission Cable  
DVPACAB2A30



■ Digital Display Panel  
DVPDU01



■ Handheld Programming Panel  
DVP-HPP02



Model name	Spec.
DVP16EH00R3	—AC— 8 ↗ 8 ↑ (R) → 2 groups of 200kHz pulse input
DVP16EH00T3	—AC— 8 ↗ 8 ↑ (T) → 2-axis of 200kHz pulse output, 2 groups of 200kHz pulse input
DVP20EH00R3	—AC— 12 ↗ 8 ↑ (R) → 2 groups of 200kHz pulse input
DVP20EH00T3	—AC— 12 ↗ 8 ↑ (T) → 2-axis of 200kHz (each axis) pulse output, 2 groups of 200kHz pulse input
DVP32EH00R3	—AC— 16 ↗ 16 (R) → 4 groups of 200kHz pulse input
DVP32EH00T3	—AC— 16 ↗ 16 (T) → 2-axis of 200kHz (each axis) pulse output, 4 groups of 200kHz pulse input
DVP32EH00M3	—AC— 16 ↗ 16 (M) → 2-axis of 200kHz (each axis) pulse output, 4 groups of 200kHz pulse input
DVP32EH00R3-L*	—AC— 16 ↗ 16 (R) → 4 groups of 200kHz pulse input
DVP32EH00T3-L*	—AC— 16 ↗ 16 (T) → 2-axis of 200kHz (each axis) pulse output, 4 groups of 200kHz pulse input
DVP40EH00R3	—AC— 24 ↗ 16 (R) → 4 groups of 200kHz pulse input
DVP40EH00T3	—AC— 24 ↗ 16 (T) → 4-axis of 200kHz (each axis) pulse input/output
DVP48EH00R3	—AC— 24 ↗ 24 (R) → 4 groups of 200kHz pulse input
DVP48EH00T3	—AC— 24 ↗ 24 (T) → 4-axis of 200kHz (each axis) pulse input/output
DVP64EH00R3	—AC— 32 ↗ 32 (R) → 4 groups of 200kHz pulse input
DVP64EH00T3	—AC— 32 ↗ 32 (T) → 4-axis of 200kHz (each axis) pulse input/output
DVP80EH00R3	—AC— 40 ↗ 40 (R) → 4 groups of 200kHz pulse input
DVP80EH00T3	—AC— 40 ↗ 40 (T) → 4-axis of 200kHz (each axis) pulse input/output

—AC—:AC power supply ↗:Input points ↑:Output points (R):Relay output (T):Transistor output (M):Differential output

\*Supports left-side high-speed extension.

#### Digital I/O Modules

■ Input Point Extension  
DVP08HM11N  
DVP16HM11N



■ Output Point Extension  
DVP08HN11R/T  
DVP32HN00R/T



■ Input/Output Point Extension  
DVP08HP11R/T  
DVP16HP11R/T  
DVP32HP00R/T  
DVP48HP00R/T



#### Analog I/O Modules

##### Analog Function Extension

■ Analog Input  
DVP04AD-H2  
V: 14-bit  
I: 13-bit



■ Analog Output  
DVP04DA-H2  
V: 12-bit  
I: 12-bit



■ Analog Input/Output  
DVP06XA-H2  
Input 4CH / Output 2CH  
V: 12-bit V: 12-bit  
I: 11-bit I: 12-bit



##### Temperature Measurement

■ Sensor: Pt100  
DVP04PT-H2



■ Sensor: J, K, R, S,  
T type  
thermocouple



■ DVP32EH00R2-L & DVP32EH00T2-L  
are also compatible with left-side  
high-speed extension modules for  
DVP-SV series.

##### Motion Control

■ Single-Axis  
Positioning  
DVP01PU-H2



■ High-Speed  
Counter  
DVP01HC-H2



\*Contact your sales representative for the official launch date of the left-side high-speed extension modules.



## Extension Modules

Left-Side High-Speed Extension Modules		General Extension Modules		
<b>Communication Modules</b>		<b>I/O Point Extension</b>		
<ul style="list-style-type: none"> <li>■ DeviceNet Master DVPDNET-SL</li> <li>■ Ethernet DVPENO1-SL</li> <li>■ CANopen Master DVPCOPM-SL</li> <li>■ RS-485/RS-422 Serial Communication Module DVPSCM12-SL</li> </ul>		<ul style="list-style-type: none"> <li>■ Input Point Extension DVP08SM11N DVP16SM11N</li> <li>■ Output Point Extension DVP06SN11R DVP08SN11R/T DVP16SN11T</li> <li>■ Input/Output Point Extension DVP08SP11R/T DVP16SP11R/T DVP16SP11TS(PNP)</li> </ul>	<ul style="list-style-type: none"> <li>■ Pin Header Input DVP32SM11N</li> <li>■ Pin Header Output DVP32SN11TN</li> <li>■ Digital Switch DVP08ST11N</li> </ul>	
<b>Analog Function Extension</b>		<b>Analog Function Extension</b>		
<ul style="list-style-type: none"> <li>■ Analog Input DVP04AD-SL</li> <li>■ Analog Output DVP04DA-SL</li> </ul>		<ul style="list-style-type: none"> <li>■ Analog Input DVP04AD-S DVP06AD-S</li> <li>■ Analog Output DVP04DA-S DVP02DA-S</li> <li>■ Analog Input/Output DVP06XA-S</li> </ul>		
<b>Load Cell/ Tension Control</b>		<b>Temperature Measurement</b>		
<ul style="list-style-type: none"> <li>■ Load Cell Module DVP02LC-SL</li> </ul>		<ul style="list-style-type: none"> <li>■ Sensor: Pt100 DVP04PT-S</li> <li>■ Sensor: J, K, R, S, T type thermocouple DVP04TC-S</li> </ul>	<ul style="list-style-type: none"> <li>■ Single-Axis Positioning DVP01PU-S</li> </ul>	
<b>Communication Modules</b>		<b>Motion Control</b>		
<ul style="list-style-type: none"> <li>■ PROFIBUS Slave DVPPF01-S</li> <li>■ DeviceNet Slave DVPD01-S</li> </ul>		<b>Power Supply Modules</b>		
				

\*1. Contact your sales representative for the official launch date of the left-side high-speed extension modules.

2. DVP32EH00R2-L & DVP32EH00T2-L are also compatible with the left-side high-speed extension modules.

## Electrical Specifications

	AC	DC
Power supply voltage	100 ~ 240VAC (-15% ~ 10%), 50/60Hz ± 5%	24VDC (-15% ~ 20%)
Fuse capacity	2A/250VAC	ES:2A/250VAC; SV:2.5A/30VDC
Spike voltage durability	1,500VAC (Primary-secondary); 1,500VAC (Primary-PE); 500VAC (Secondary-PE)	
Insulation impedance	>5MΩ (all I/O point-to-ground: 500VDC)	
Noise immunity	ESD: 8kV Air Discharge EFT: Power Line : 2kV Digital I/O : 1kV Analog & Communication I/O : 1kV RS: 26MHz ~ 1GHz : 10V/m	
Earth	The diameter of grounding wire shall not be shorter than that of the power supply cable. (When many PLCs are in use at the same time, please make sure every PLC is properly grounded.)	
Storage / operation	Storage: -25°C ~ 70°C (temperature); 5% ~ 95% (humidity) Operation: 0°C ~ 55°C (temperature); 50% ~ 95% (humidity); pollution degree 2	

### Input Point Specification<sup>\*1</sup>

Max. Input frequency	10kHz	20kHz	100kHz	200kHz
Input signal type	SINK / SOURCE			
Input signal voltage	24VDC ± 10% (5mA)			
Response time	EH2/EH3/SV/PM	OFF→ON: 20μs ON→OFF: 50μs	ES/EX/SS/SA/SX/SC SS2/SX2 OFF→ON: 3.5μs ON→OFF: 20μs	SC/ES2/EX2/SA2/SX2 OFF→ON: 2.5μs ON→OFF: 5μs
	ES2/EX2			
	ES/EX			
	SS/SA/SX/SC			
	SS2			
	SA2/SX2/SE			

\*1. For more detailed specifications, see "Specification" section in the instruction sheet of each model.

\*2. When the input point on MPU conducts only general input functions, use D1020 or D1021 to adjust the response time. (Default: 10ms)

### Output Point Specification<sup>\*1</sup>

	Transistor-T	Relay-R			
		General speed	High speed		
Max. exchange (working) frequency	1Hz <sup>*2</sup>	10kHz	100kHz	200kHz	
Current spec.	EH2/EH3/SV/PM	2A	0.3A/point@40°C	SA2/SX2/ES2/EX2 Resistive: 0.5A/point (4A/COM) Conductive: 12W (24VDC) Light bulb: 2W (24VDC)	
				EH2/EH3/SV/PM Resistive: 0.5A/point (4A/COM) Conductive: 12W (24VDC) Light bulb: 2W (24VDC)	
	ES2/EX2	1.5A		SC <1kHz, 0.3A/point@40°C ≥1kHz, 30mA/point@40°C	
	ES/EX				
Voltage spec.	250VAC/30VDC		30VDC		
Response time	10ms	OFF→ON: 20μs ON→OFF: 30μs	OFF→ON: 2μs ON→OFF: 3μs	OFF→ON: 0.5μs ON→OFF: 2.5μs	

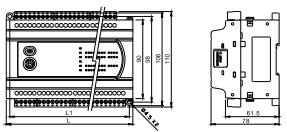
\*1. For more detailed specifications, see "Specification" section in the instruction sheet of each model.

\*2. Relay life: Resistive load -> more than 200,000 times; conductive load -> more than 80,000 times.

## Dimensions

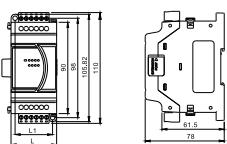
### ES2/EX2 Series MPU

Model name (mm)	L	L1
DVP16ES200R/T	105	97
DVP24ES200R/T	125	117
DVP32ES200R/T	145	137
DVP32ES200TC	145	137
DVP32ES211T	145	137
DVP40ES200R/T	165	157
DVP60ES200R/T	225	217
DVP20EX200R/T	145	137
DVP30EX200R/T	165	157



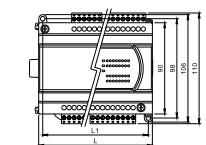
### ES2/EX2 Series Extension Modules

Model name (mm)	L	L1	Type
DVP08XM211N	45	37	○
DVP08XP211R/T	45	37	○
DVP08XN211R/T	45	37	○
DVP16XM211N	70	62	○
DVP16XP211R/T	70	62	○
DVP16XN211R/T	70	62	○
DVP24XP200R/T	145	137	○
DVP24XN200R/T	145	137	○
DVP32XP200R/T	145	137	○
DVP04AD-E2	70	62	○
DVP02DA-E2	70	62	○
DVP04DA-E2	70	62	○
DVP06XA-E2	70	62	○
DVP04PT-E2	70	62	○
DVP04TC-E2	70	62	○



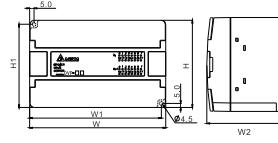
### MC Series MPU

Model name (mm)	H	H1	W	W1	W2
DVP10MC11T	90	80	174	164	82
DVP20PM00M	90	80	174	164	82



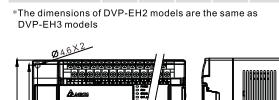
### ES/EX Series MPU

Model name (mm)	H	H1	W	W1	W2
DVP14ES00R2/T2	100	95	104	99	82
DVP24ES00(11)R2/T2	100	95	155	150	82
DVP32ES00R2/T2	100	95	155	150	82
DVP32ES00R2/T	100	95	155	150	82
DVP40ES00R2/T2	100	95	155	150	82
DVP60ES00R2/T2	100	85.5	185	180.5	89.6
DVP20EX00(11)R2/T2	100	95	155	150	82



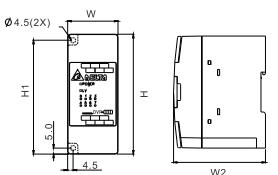
### EH3 Series MPU

Model name (mm)	H	H1	W	W1	W2
DVP16EH00R3/T3	90	80	113	103	82
DVP20EH00R3/T3	90	80	113	103	82
DVP32EH00M3	90	80	143.5	133.5	82
DVP32EH00R3/T3	90	80	143.5	133.5	82
DVP32EH00R3-L	90	80	143.5	133.5	82
DVP32EH00T3-L	90	80	143.5	133.5	82
DVP40EH00R3/T3	90	80	158.8	153.8	82
DVP48EH00R3/T3	90	80	212	202	82
DVP80EH00R3/T3	90	80	276	266	82



### ES/EX Series Extension Modules

Model name (mm)	H	H1	W	W1	W2
DVP08XM11N	100	95	42	37.5	82
DVP16XM11N	100	95	104	99	82
DVP08XN11R/T	100	95	42	37.5	82
DVP16XN11R/T	100	95	155	150	82
DVP24XN11R/T	100	95	155	150	82
DVP08HN11R/T	100	95	155	150	82
DVP08XP11R/T	100	95	42	37.5	82
DVP24XP11R/T	100	95	155	150	82
DVP24XP00R/T	100	95	155	150	82
DVP32XP00R/T	100	95	155	150	82

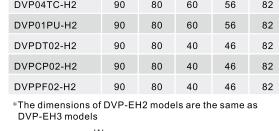


### EH3 Series Extension Modules

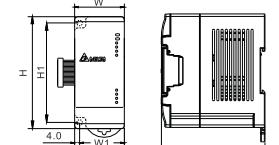
Model name (mm)	H	H1	W	W1	W2
DVP08HM11N	90	80	40	36	82
DVP16HM11N	90	80	55	51	82
DVP08HN11R/T	90	80	40	36	82
DVP32HN00R/T	90	80	143.5	133.5	82.2
DVP08HP11R/T	90	80	40	36	82
DVP16HP11R/T	90	80	55	51	82
DVP32HP00R/T	90	80	143.5	133.5	82.2
DVP48HP00R/T	90	80	174	164	82.2



Model name (mm)	H	H1	W	W1	W2
DVP04AD-H2	90	80	60	56	82
DVP04DA-H2	90	80	60	56	82
DVP06XA-H2	90	80	60	56	82
DVP04PT-H2	90	80	60	56	82
DVP04TC-H2	90	80	60	56	82
DVP01PU-H2	90	80	60	56	82
DVPDT02-H2	90	80	40	46	82
DVPPOP02-H2	90	80	40	46	82
DVPPF02-H2	90	80	40	46	82



Model name (mm)	H	H1	W	W1	W2
DVP04AD-H2	90	80	60	56	82
DVP04DA-H2	90	80	60	56	82
DVP06XA-H2	90	80	60	56	82
DVP04PT-H2	90	80	60	56	82
DVP04TC-H2	90	80	60	56	82
DVP01PU-H2	90	80	60	56	82
DVPDT02-H2	90	80	40	46	82
DVPPOP02-H2	90	80	40	46	82
DVPPF02-H2	90	80	40	46	82



Model name (mm)	H	H1	W	W1	W2
DVP02PM00D	90	80	174	164	82
DVP20PM00M	90	80	174	164	82

\*The dimensions of DVP-EH2 models are the same as DVP-EH3 models

W1: 103.5 mm, W2: 82 mm

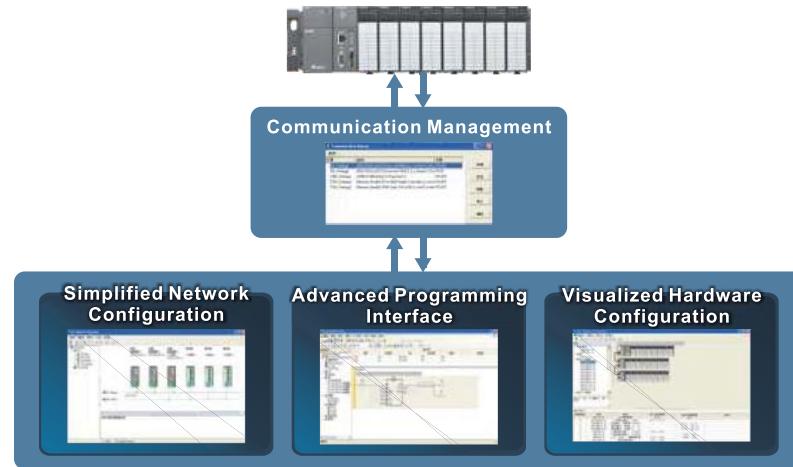
W1: 103.5 mm, W

# ISPSof V2.0

## Highly Accessible Programming Software

### Fully Integrated Interface:

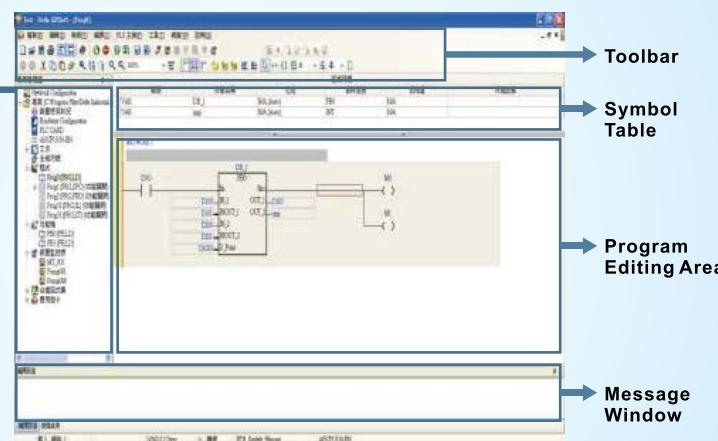
Advanced Programming Interface + Visualized Hardware Configuration + Simplified Network Configuration



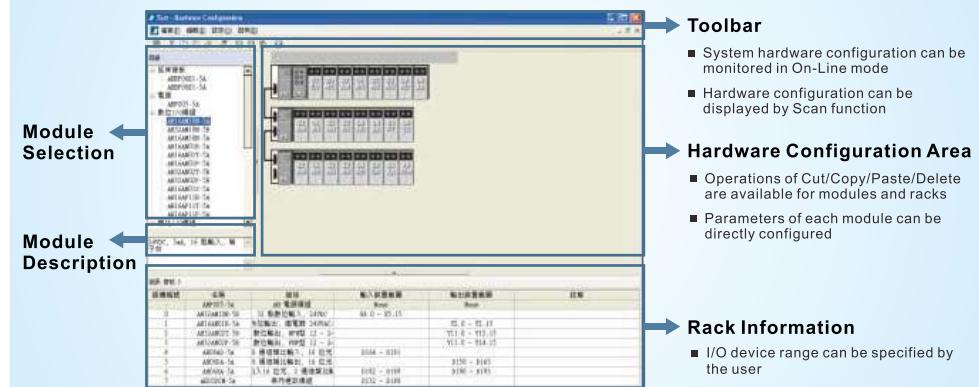
### Advanced Programming Interface

#### Project management window

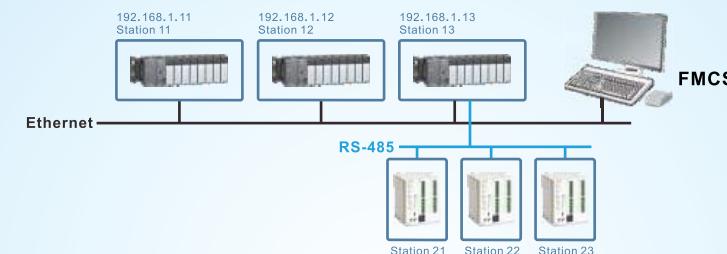
- New functions: Network Configuration, Hardware Configuration and PLC Card.
- Supports 5 programming languages (LDF/FBD/SFC/IL/ST) in both main program and FB.
- Function Blocks: Symbols can be introduced in call-by-value or call-by-reference types. Function blocks can be called in function block for up to 32 levels.
- Monitor Table: Monitor tables can be stored and managed separately. Multiple monitor tables can be stored in a single project.
- Delta Library: Users can design frequently used instructions for specific applications in different industries.
- Task: Supports external interrupts and timer interrupts.



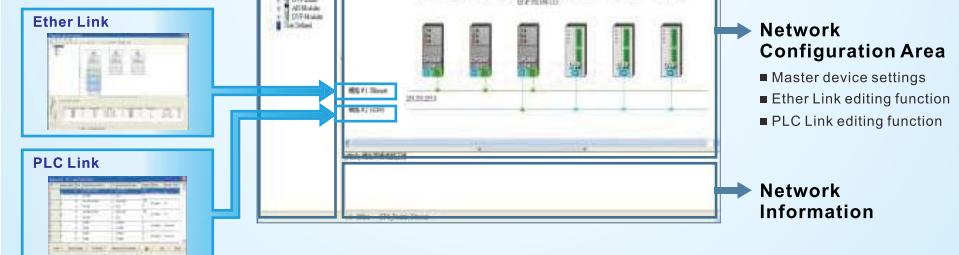
### Visualized Hardware Configuration



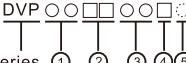
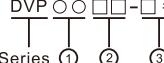
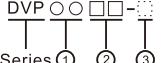
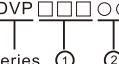
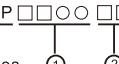
### Simplified Network Configuration



#### Network Device Selection



## Model Name Explanation

<b>• MPU</b>	<b>• DI/DO Module</b>	<b>• AI/AO Module</b>
 <p>1. Total I/O points 2. Model ES/ES2 : ES/ES2 series MPU EX/EX2 : EX/EX2 series MPU SS/SS2 : SS/SS2 series MPU SA/SA2 : SA/SA2 series MPU SX/SX2 : SX/SX2 series MPU SC : SC series MPU SV : SV series MPU PM : PM series MPU EH : EH series MPU 3. Power supply 00 : AC power input 11 : DC power input 4. Output type R : Relay T : Transistor (NPN) M : Mixed with differential signal S : Transistor (PNP) 5. Version</p>	 <p>1. Total I/O points 2. Model X : For ES/EX/ES2/EX2 series MPU S : For SS/SA/SX series MPU For SS2/SA2/SX2 series MPU For SC/SE/SV/SV2 series MPU H : For EH/EH2/EH3/PM series MPU 3. I/O type M : Input point N : Output point P : Input + output 4. Power supply 00 : AC power input 11 : DC power input 5. Output type R : Relay T : Transistor (NPN) TS : Transistor (PNP)</p>	 <p>1. Total I/O points 2. Model AD : Analog/digital conversion DA : Digital/analog conversion PT : PT100 type temperature module TC : Thermocouple type temperature Module XA : AD + DA module 3. Model S : For SS/SA/SX series MPU For SS2/SA2/SX2 series MPU For SC/SE/SV/SV2 series MPU H : For EH/EH2/EH3/PM series MPU H2 : For EH2 series MPU H3 : For EH3 series MPU SL : For MPU with left-side interface E : For ES/EX series MPU E2 : For ES2/EX2 series MPU</p>
<b>• PI/PO Module</b>	<b>• Peripherals</b>	<b>• Network Module</b>
 <p>1. Total I/O points 2. Model HC : High-speed counter PU : Single-axis positioning module 3. Model H : For EH/EH2/EH3/PM series MPU S : For SS/SA/SX series MPU For SS2/SA2/SX2 series MPU For SC/SE/SV/SV2 series MPU SL: left-side extension for SV series MPU</p>	 <p>1. Product name HPP : Handheld programming panel DU : Digital display panel 2. Type/function 01 : Type 01 02 : Type 02 03 : Type 03</p>	 <p>1. Model EN01 : MODBUS TCP DNET : DeviceNet master COPM : CANopen master CP02 : CANopen master DT01/02 : DeviceNet master PF01/02 : PROFIBUS DP master 3. Model SL : left-side extension for SV series MPU H2 : For EH2 series MPU H3 : For EH3 series MPU S : For Slim series MPU</p>
<b>• Accessory: Cable</b>	<b>• Remote I/O</b>	<b>• Function Card</b>
 <p>1. Accessory 2. Type CAB : Cable 3. Type 1, 2, 3, 4, ..... 4. Length 15 : 1.5m 30 : 3.0m</p>	 <p>1. Model DNET : DeviceNet 485 : RS-485 EN01 : MODBUS TCP</p>	 <p>1. Function Card 2. Type 232 : RS-232 card 422 : RS-422 card 2OT : 2DO card, transistor output... 3. Particular definition S : Slave mode (applicable to COM3 coding only)</p>
<b>• Accessory: Other</b>		
 <p>1. Accessory 2. Type Bt : Battery 3. Type : 01, 02 .....</p>		

## Select A Suitable PLC

Select your desired specifications and locate the most suitable MPU.								
What do you need?			Select specifications		Check		Locate MPU	
Item	Spec.	Check	Model					
			ES2	EX2	EH3	SS2	SA2	SX2
Power supply	AC	<input type="checkbox"/>	○	○	○			
	DC	<input type="checkbox"/>				○	○	○
I/O points	< 256	<input type="checkbox"/>	△	△				
	< 512	<input type="checkbox"/>			△	△	△	△
Program capacity	< 8k	<input type="checkbox"/>			○			
	< 16k	<input type="checkbox"/>	○	○		○	○	○
	< 32k	<input type="checkbox"/>			○			
Output type	Transistor (NPN)	<input type="checkbox"/>	○	○	○	○	○	○
	Transistor (PNP)	<input type="checkbox"/>			△	△	○	△
	Relay	<input type="checkbox"/>	○	○	○	○	○	○
	Differential signal	<input type="checkbox"/>			○			
Communication	3 COM ports (RS-232/485)	<input type="checkbox"/>	○	○	△	○	○	△
	Ethernet	<input type="checkbox"/>			△	△	△	○
	DeviceNet	<input type="checkbox"/>			△	△	△	△
	CANopen	<input type="checkbox"/>			△	△	△	△
	PROFIBUS	<input type="checkbox"/>			△	△	△	△
Positioning	2-axis output	<input type="checkbox"/>	○	○	○	○	○	○
	4-axis output	<input type="checkbox"/>		○			○	○
	> 4 axes	<input type="checkbox"/>			△	△	△	△
	2-axis interpolation	<input type="checkbox"/>	○	○	○	○	○	○
	200kHz high speed	<input type="checkbox"/>			○	△	△	○
High-speed counting	< 2 channels	<input type="checkbox"/>	○	○		○	○	○
	> 3 channels	<input type="checkbox"/>			○ <sup>*3</sup>	△	△	○
	200kHz high speed	<input type="checkbox"/>			○	△	△	○
Analog function	< 4 channels (AD)	<input type="checkbox"/>	△	○	△	△	○	△
	< 2 channels (DA)	<input type="checkbox"/>	△	○	○ <sup>*2</sup>	△	△	○ <sup>*2</sup>
<b>Note:</b>								
○ : With such specification · ○ : Varies upon model · △ : With such specification when connected to extension module								
*1 : S series and EH2 series support only slave. SV/SX2/SA2/EH3-L series support both master and slave.								
*2 : EX/SX2 series have 4 channels of analog input and 2 channels of analog output.								
*3 : Besides the built-in 8 channels of high-speed counters, EH2 series can be connected to high-speed counter modules.								



## Ordering Information

### ES/EX Series MPU

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
ES series standard MPU	100~240VAC	Relay	8	6	DVP14ES00R2	
	100~240VAC	Transistor	8	6	DVP14ES00T2	
	100~240VAC	Relay	16	8	DVP24ES00R2	
	100~240VAC	Transistor	16	8	DVP24ES00T2	
	100~240VAC	Relay	18	12	DVP30ES00R2	
	100~240VAC	Transistor	18	12	DVP30ES00T2	
	100~240VAC	Relay	16	16	DVP32ES00R2	
	100~240VAC	Transistor	16	16	DVP32ES00T2	
	100~240VAC	Relay	24	16	DVP40ES00R2	
	100~240VAC	Transistor	24	16	DVP40ES00T2	
EX series analog MPU	100~240VAC	Relay	36	24	DVP60ES00R2	
	100~240VAC	Transistor	36	24	DVP60ES00T2	
	100~240VAC	Relay	8	6	DVP20EX00R2	
	100~240VAC	Analog	4	2		
	100~240VAC	Transistor	8	6	DVP20EX00T2	
24VDC	24VDC	Relay	8	6	DVP20EX11R2	
	24VDC	Analog	4	2		

### ES/EX Series Digital/Analog Module

Product name	Output method	Inputs	Outputs	Model name	Certificates
Digital module	-	8	-	DVP08XM11N	
	Relay	-	8	DVP08XN11R	
	Transistor	-	8	DVP08XN11T	
	-	16	-	DVP16XM11N	
	Relay	-	16	DVP16XN11R	
	Transistor	-	16	DVP16XN11T	
	Relay	-	24	DVP24XN11R	
	Transistor	-	24	DVP24XN11T	
	Relay	4	4	DVP08XP11R	
	Transistor	4	4	DVP08XP11T	
	Relay	16	8	DVP24XP11R	
	Transistor	16	8	DVP24XP11T	
	Relay	16	16	DVP32XP11R	
	Transistor	16	16	DVP32XP11T	

### ES2/EX2 Series Digital I/O Module (AC power supply)

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
ES2/EX2 digital module	100~240VAC	Relay	-	24	DVP24XN200R	
	100~240VAC	Transistor	-	24	DVP24XN200T	
	100~240VAC	Relay	16	8	DVP24XP200R	
	100~240VAC	Transistor	16	8	DVP24XP200T	
	100~240VAC	Relay	16	16	DVP32XP200R	
	100~240VAC	Transistor	16	16	DVP32XP200T	

### EC3 Series MPU

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
EC3 series standard MPU	100~240VAC	Relay	6	4	DVP10EC00R3	
	100~240VAC	Transistor	6	4	DVP10EC00T3	
	100~240VAC	Relay	8	6	DVP14EC00R3	
	100~240VAC	Transistor	8	8	DVP16EC00R3	
	100~240VAC	Relay	8	8	DVP20EC00R3	
	100~240VAC	Transistor	12	8	DVP20EC00T3	
	100~240VAC	Relay	12	12	DVP24EC00R3	
	100~240VAC	Transistor	12	12	DVP24EC00T3	
	100~240VAC	Relay	18	12	DVP30EC00R3	
	100~240VAC	Transistor	18	12	DVP30EC00T3	
	100~240VAC	Relay	16	16	DVP32EC00R3	
	100~240VAC	Transistor	16	16	DVP32EC00T3	
	100~240VAC	Relay	24	16	DVP40EC00R3	
	100~240VAC	Transistor	24	16	DVP40EC00T3	
	100~240VAC	Relay	36	24	DVP60EC00R3	
	100~240VAC	Transistor	36	24	DVP60EC00T3	
Fastest execution time of basic instructions				3.8μs	Execution time of MOV instruction	5.04μs

### ES2/EX2 Series MPU

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
ES2 series standard MPU	100~240VAC	Relay	8	8	DVP16ES200R	
	100~240VAC	Transistor	8	8	DVP16ES200T	
	100~240VAC	Relay	16	8	DVP24ES200R	
	100~240VAC	Transistor	16	8	DVP24ES200T	
	100~240VAC	Relay	16	16	DVP32ES200R	
	100~240VAC	Transistor	16	16	DVP32ES200T	
	24VDC	Transistor	16	16	DVP32ES211T	
	100~240VAC	Relay	24	16	DVP40ES200R	
	100~240VAC	Transistor	24	16	DVP40ES200T	
	100~240VAC	Relay	36	24	DVP60ES200R	
	100~240VAC	Transistor	36	24	DVP60ES200T	
	100~240VAC	Relay	36	24	DVP32ES200RC	
	100~240VAC	Transistor	36	24	DVP32ES200TC	
	100~240VAC	Relay	8	6	DVP20EX200R	
	100~240VAC	Analog	4	2		
EX2 series analog MPU	100~240VAC	Transistor	8	6	DVP20EX200T	
	100~240VAC	Relay	16	10	DVP30EX200R	
	100~240VAC	Analog	3	1		
	100~240VAC	Transistor	16	10	DVP30EX200T	
	100~240VAC	Analog	3	1		
	0.35μs	Execution time of MOV instruction	3.4μs			

## Ordering Information

### ES2/EX2 Series Digital / Analog Module (DC24V)

Product name	Output method	Inputs	Outputs	Model name	Certificates
ES2/EX2 series digital module	-	8	-	DVP08XM211N	
	Relay	-	8	DVP08XN211R	
	Transistor	-	8	DVP08XN211T	
	Relay	4	4	DVP08XP211R	
	Transistor	4	4	DVP08XP211T	
	-	16	-	DVP16XM211N	
	Relay	-	16	DVP16XN211R	
	Transistor	-	16	DVP16XN211T	
	Relay	8	8	DVP16XP211R	
	Transistor	8	8	DVP16XP211T	
ES2/EX2 series analog I/O module	■ 4 points of analog voltage (10V, 5V) / current (20mA, 0~20mA, 4~20mA) input *1 ■ Resolution: 14-bit (-32,000~+32,000)			DVP04AD-E2	 
	■ 4 points of analog voltage (-10V~+10V) / current (0~20mA, 4~20mA) output ■ Resolution: 14-bit (-32,000~+32,000) / (0~+32,000)			DVP04DA-E2	
	■ 2 points of analog voltage (-10V~+10V) / current (0~20mA, 4~20mA) output *1 ■ Resolution: 14-bit (-32,000~+32,000) / (0~+32,000)			DVP02DA-E2	
	■ 4 points of analog voltage (10V, 5V) / current (20mA, 0~20mA, 4~20mA) input *1 ■ Input resolution: 14-bit (-32,000~+32,000)			DVP06XA-E2	
	■ 2 points of analog voltage (-10V~+10V) / current (0~20mA, 4~20mA) output ■ Output resolution: 14-bit (-32,000~+32,000) / (0~+32,000)				
	■ 4 points of platinum RTD (Pt100, Pt1000, Ni100, Ni1000) sensor input / 0~300Ω resistance input *1 ■ Resolution: 16-bit ■ With PID temperature control			DVP04PT-E2	
ES2/EX2 series temperature measurement module	■ 4 points of thermocouple (J, K, R, S, T, E, N Type) sensor input / -80mV~+80mV/voltage input *1 ■ Resolution: 20-bit ■ With PID temperature control			DVP04TC-E2	

\*1. Digital/analog photocoupler isolation. No isolation among channels.

### EH2/EH3 Series MPU

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
EH2/EH3 series standard MPU	100~240VAC	Relay	8	8	DVP16EH00R2/DVP16EH00R3	
	100~240VAC	Transistor	8	8	DVP16EH00T2/DVP16EH00T3	
	100~240VAC	Relay	12	8	DVP20EH00T2/DVP20EH00R3	
	100~240VAC	Transistor	12	8	DVP20EH00T2/DVP20EH00T3	
	100~240VAC	Transistor	16	16	DVP32EH00T2/DVP32EH00T3	
	100~240VAC	Relay	16	16	DVP32EH00R2/DVP32EH00R3	
	100~240VAC	Differential	16	16	DVP32EH00M2/DVP32EH00M3	
	100~240VAC	Relay	16	16	DVP32EH00R2-L/DVP32EH00R3-L	 
	100~240VAC	Transistor	16	16	DVP32EH00T2-L/DVP32EH00T3-L	
	100~240VAC	Transistor	24	16	DVP40EH00T2/DVP40EH00T3	
	100~240VAC	Relay	24	16	DVP40EH00R2/DVP40EH00R3	
	100~240VAC	Relay	24	24	DVP48EH00R2/DVP48EH00R3	
	100~240VAC	Transistor	24	24	DVP48EH00T2/DVP48EH00T3	
	100~240VAC	Relay	32	32	DVP64EH00R2/DVP64EH00R3	
	100~240VAC	Transistor	32	32	DVP64EH00T2/DVP64EH00T3	
	100~240VAC	Relay	40	40	DVP80EH00R2/DVP80EH00R3	
	100~240VAC	Transistor	40	40	DVP80EH00T2/DVP80EH00T3	
Execution time of basic instructions			0.24μs			

### EH2/EH3 Series Digital/Analog Module

Product name	Output method	Inputs	Outputs	Model name	Certificates
Digital module	Relay	4	4	DVP08HP11R	
	Transistor	4	4	DVP08HP11T	
	Relay	-	8	DVP08HN11R	
	Transistor	-	8	DVP08HM11T	
	-	8	-	DVP16HM11N	
	Relay	8	8	DVP16HP11R	
	Transistor	8	8	DVP16HP11T	
	-	16	-	DVP16HN11N	
	Relay	-	32	DVP32HN00R	 
	Transistor	-	32	DVP32HN00T	
Analog module	Relay	16	16	DVP32HP11R	
	Transistor	16	16	DVP32HP11T	
	Relay	24	24	DVP48HP00R	
	Transistor	24	24	DVP48HP00T	
	■ 4 points of analog voltage (-10V~+10V)/current (-20mA~+20mA) *1 ■ Input resolution: 14-bit ■ Built-in RS-485 interface			DVP04AD-H2	
	■ 4 points of analog voltage (0V~+10V)/current (0mA~+20mA) output *1 ■ Resolution: 12-bit ■ Built-in RS-485 interface			DVP04DA-H2	
	■ 4 points of analog voltage (-10V~+10V)/current (-20mA~+20mA) input ■ 2 points of analog voltage (0V~+10V)/current (0mA~+20mA) output ■ Resolution: 12-bit ■ Built-in RS-485 interface			DVP06XA-H2	
	■ 4 points of platinum RTD (PT100) sensor input *1 ■ Resolution: 0.1°C ■ Built-in RS-485 interface			DVP04PT-H2	
	■ 4 points of thermocouple (J, K, R, S, T type) sensor input *1 ■ Resolution: 0.1°C ■ Built-in RS-485 interface			DVP04TC-H2	
	■ 8 points of thermocouple (J, K, R, S, T type) sensor input *1 ■ Resolution: 0.1°C ■ Built-in RS-485 interface			DVP08TC-H2	

\*1. Digital/analog photocoupler isolation. No isolation among channels.

### EH2/EH3 Series Extension Module / Function Card

Product name	Output method	Inputs	Outputs	Model name	Certificates
Positioning module	Servo position control module (single axis, 200kHz)			DVP01PU-H2	
	High-speed counter			DVP01HC-H2	
Communication module	PROFIBUS DP slave communication module			DVPFP02-H2	
	CANopen slave communication module			DVPCP02-H2	
Function card	DeviceNet slave communication module			DVPDT02-H2	
	RS-232 port conversion (COM2) (EH2: COM2 ; EH3: COM3)			DVP-F232	
	RS-422 port conversion (COM2) (EH2: COM2 ; EH3: COM3)			DVP-F422	
	RS-232 port extension (COM3), function Cards			DVP-F232S	
	RS-485 port extension (COM3), function Cards			DVP-F485S	
	RS-485 port extension (COM3), function Cards (DVP-EH3 only)			DVP-F485	
	■ 2 points of analog voltage (0~10V)/current (0~20mA) input ■ Resolution: 12-bit			DVP-F2AD	
	■ 2 points of analog voltage (0~10V)/current (0~20mA) output ■ Resolution: 12-bit			DVP-F2DA	
	Ethernet communication card			DVP-FEN01	
	Displays data in register and real-time clock.			DVPDU01	
Digital display panel					

## Ordering Information

### S Series MPU

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
SV2 series functional MPU	24VDC	Relay	16	12	DVP28SV211R	
	24VDC	Transistor	16	12	DVP28SV11T	
SV series functional MPU	24VDC	Relay	16	12	DVP28SV11R	
	24VDC	Transistor	16	12	DVP28SV11T	
Execution time of basic instructions			0.24μs			
Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
SS2 series standard MPU	24VDC	Relay	8	6	DVP14SS211R	
	24VDC	Transistor	8	6	DVP14SS211T	
SA2 series advance MPU	24VDC	Relay	8	4	DVP12SA211R	
	24VDC	Transistor	8	4	DVP12SA211T	
SE series network MPU	24VDC	Relay	8	4	DVP12SE11R	
	24VDC	Transistor	8	4	DVP12SE11T	
SX2 series analog MPU	24VDC	Relay	8 (4AI)	6(2AO)	DVP20SX211R	
	24VDC	Transistor (NPN)	8 (4AI)	6(2AO)	DVP20SX211T	
SC series positioning MPU	24VDC	Transistor (PNP)	8 (4AI)	6(2AO)	DVP20SX211S	
	24VDC	Transistor	8	4	DVP12SC11T	
Fastest execution time of basic instructions			0.35μs	Execution time of MOV instruction		3.4μs
Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
SS series standard MPU	24VDC	Relay	8	6	DVP14SS11R2	
	24VDC	Transistor	8	6	DVP14SS11T2	
SA series advance MPU	24VDC	Relay	8	4	DVP12SA11R	
	24VDC	Transistor	8	4	DVP12SA11T	
SX series analog MPU	24VDC	Relay	4 (2AI)	2 (2AO)	DVP10SX11R	
	24VDC	Transistor	4 (2AI)	2 (2AO)	DVP10SX11T	
SC series positioning MPU	24VDC	Transistor	8	4	DVP12SC11T	
	24VDC	Transistor	8	4	DVP12SC11T	
Execution time of basic instructions			3.8μs	Execution time of MOV instruction		5.04μs

### S Series Digital/Audio Module

Product name	Output method	Inputs	Outputs	Model name	Certificates
Digital module	Relay	-	6	DVP06SN11R	
	Relay	-	8	DVP08SN11R	
	Transistor	-	8	DVP08SN11T	
	Transistor	-	16	DVP16SN11T	
	Relay	4	4	DVP08SP11R	
	Transistor	4	4	DVP08SP11T	
	-	8	-	DVP08SM11N	
	-	8	-	DVP08SM10N	
	Digital switch	8	-	DVP08ST11N	
	Relay	8	8	DVP16SP11R	
	Transistor (NPN)	8	8	DVP16SP11T	
	Transistor (PNP)	8	8	DVP16SP11TS	
	-	16	-	DVP16SM11N	
	Transistor, Pin header	-	32	DVP32SN11TN	
	Pin header	32	-	DVP32SM11N	
Analog I/O module	■ 4 points of analog input voltage (-10V~+10V)/current (-20mA~+20mA) *1 ■ Input resolution: 14-bit ■ Built-in RS-485 interface				DVP04AD-S
	■ 4 points of analog input voltage (0V~+10V)/current (0mA~+20mA) *1 ■ Resolution: 12-bit ■ Built-in RS-485 interface				DVP04DA-S
	■ 2 points of analog input voltage (0V~+10V)/current (0mA~+20mA) *1 ■ Resolution: 12-bit ■ Built-in RS-485 interface				DVP02DA-S
	■ 6 points of analog input voltage (-10V~+10V)/current (-20mA~+20mA) *1 ■ Input resolution: 14-bit ■ Built-in RS-485 interface				DVP06AD-S
	■ Analog input+output module (6 points) ■ 4 points of analog input voltage (-10V~+10V)/current (-20mA~+20mA) ■ 2 points of analog input voltage (0V~+10V)/current (0mA~+20mA) ■ Resolution: 12-bit ■ Built-in RS-485 interface				DVP06XA-S

### S Series Extension Module / Left-Side High-Speed Module

Product name	Power supply	Inputs	Outputs	Model name	Certificates
Left-side high-speed analog I/O module	■ 4 groups of analog input *1 ■ Signal range: 1~5 V, 0~5 V, -5~5 V, 0~10 V, -10~10 V, 4~20mA, 0~20mA, -20~20mA ■ Resolution: 16-bit ■ Single channel On/Off setup enhances entire conversion efficiency. ■ Conversion time: 250μs/point ■ Off-line alarm (1~5 V, 4~20mA)				DVP04AD-SL
Left-side high-speed load cell module	■ 4 groups of analog input *1 ■ Signal range: 0~10 V, -10~10 V, 4~20mA, 0~20mA ■ Resolution: 16-bit ■ Offers single channel On/Off setup ■ Conversion time: 250μs/point				DVP04DA-SL
Temperature measurement module	■ 2 load cell modules *1 ■ Resolution: 20-bit ■ Connectable to 4-wire/6-wire load cell sensor ■ Measurable range: 0~6mV/V				DVP02LC-SL
Positioning module	■ 4 points of platinum RTD (PT100) sensor input *1 ■ Resolution: 0.1°C ■ Built-in RS-485 interface				DVP04PT-S
Communication module	■ 4 points of thermocouple (J, K, R, S, T type) sensor input *1 ■ Resolution: 0.1°C ■ Built-in RS-485 interface				DVP04TC-S
Left-side high-speed communication module	■ Servo position control module (single axis, 200kHz)				DVP01PU-S
Remote I/O module	■ DeviceNet slave communication module ■ PROFIBUS DP slave communication module ■ Ethernet communication module, 10/100Mbps ■ DeviceNet master communication module, 500kbps ■ CANopen master communication module, 1Mbps ■ PROFIBUS DP slave communication module, 12Mbps ■ RS-485/RS-422 module - 460kbps ■ RS-485 remote I/O module, connectable to S series I/O modules ■ Ethernet remote I/O module, connectable to S series I/O modules ■ DeviceNet remote I/O module, connectable to S series I/O modules ■ PROFIBUS remote I/O module, connectable to S series I/O modules				DVPEN01-SL DVPDNET-SL DVPCOPM-SL DVPPF02-SL DVPSCM12-SL RTU-485 RTU-EN01 RTU-DNET RTU-PD01

\*1. Digital/analog photocoupler isolation. No isolation among channels.

### Communication Converter

Product name	Description	Model name	Certificates
Converter	USB to RS-485 converter	IFD6500	
	USB to CAN converter	IFD6503	
	USB to RS-485 converter	IFD6530	
	MODBUS TCP to RS-232/485 converter	IFD9506	
	EtherNet/IP to RS-232/485 converter	IFD9507	
	DeviceNet to RS-232/485 converter	IFD9502	
	CANopen to RS-232/485 converter	IFD9503	
	RS-232 to RS-485/422 isolated converter	IFD8500	
	RS-485 to RS-422 isolated repeater	IFD8510	
	RS-485/422 to RS-232 addressable isolated converter	IFD8520	

## Ordering Information

### PM Series

Product name	Power supply	Output method	Inputs	Outputs	Model name	Certificates
Professional Motion Control MPU	100~240VAC	Differential (Built-in 2-axis of independent 500kHz pulse output)	16	16	DVP10PM00M	
General Purpose Motion Controller	100~240VAC	Differential (Built-in 2-axis of independent 500kHz pulse output) (Built-in 3-axis of independent 500kHz pulse output)	8	8	DVP20PM00D DVP20PM00M	CE IEC6068-2-20
PM series extension module		Description		Model name		
	Communication card	Ethernet/CANopen communication card			DVP-FPMC	
	Memory card	Data backup memory card (64k words)			PM-PCC01	
Execution time of basic instructions	0.13μs	Execution time of MOV instruction			3.74μs	

### MC Series

Product name	Power supply	Communication Mode	Inputs	Outputs	Model name	Certificates
Network Type Motion Controller	100~240VAC	CANopen DS402	8	4	DVP10MC11T	CE IEC6068-2-20

### TP Series

Product name	Description	Model name	Certificates
TP02	Resolution: 160 x 32 dots, Serial COM ports: RS-232 & RS-485	TP02G-AS1	
	Resolution: 128 x 64 dots, Serial COM ports: RS-232 & RS-485/RS-422	TP04G-AS2	CE IEC6068-2-20
TP04	Resolution: 192 x 64 dots, Serial COM ports: RS-232 & RS-485/RS-422	TP04G-AL2	
	Resolution: 192 x 64 dots, Serial COM ports: RS-232	TP04G-AL-C	CE IEC6068-2-20
	Resolution: 192 x 64 dots, Serial COM ports: RS-232, 0~9 numeric keys available	TP04G-BL-C	
TP08	Resolution: 240 x 128 dots, Serial COM ports: RS-232 & RS-485/RS-422, 0~9 numeric keys available	TP08G-BT2	CE IEC6068-2-20

### Peripheral Accessories

Product name	Description	Model name	Certificates
	Handheld programming panel	DVPHPP02	
	Data backup memory card (built-in 1 in DVPHPP01) (DVP-EH2 only)	DVP-256FM	
	Data backup memory card (DVP-EH3 only)	DVP-512FM	
	Data backup memory card (64k words)	DVP-PCC01	
	Communication cable for DVP-HPP series and PLC, 1.5m	DVPACAB115	
	Communication cable for PC (9-pin & 25-pin D-Sub) and PLC, 1.5m	DVPACAB215	
	Communication cable for PC (9-pin D-Sub) and PLC, 1.5m	DVPACAB2A30	
	Communication cable for PC (9-pin & 25-pin D-Sub) and PLC, 3m	DVPACAB230	
	I/O connection cable for DVP-32SM series	DVPACAB7A10	
	I/O connection cable for DVP-32SN series	DVPACAB7B10	CE IEC6068-2-20
	Drive board for DVP-32SM series (32 points of output)	DVPAETB-ID32A	
	Drive board for DVP-32SN series (16 points of input)	DVPAETB-OR16A	
	Connection cable for DVP-HPP series and PC	DVPACAB315	
Accessory	Supports 4 types of RS-485 connectors	ADP485-01	
	Connection cable for ADP485-01 and ASDA-A series servo	ADPCAB03A	
	Connection cable for ADP485-01 and ASDA-B series servo	ADPCAB03B	
	I/O extension cable for ES/EX series, 30cm	DVPACAB403	
	Extension cable for EH series MPU and extension module, 0.7m	DVPACAB4A07	
	DeviceNet/CANopen distribution box, 1 for 2	TAP-CN01	
	DeviceNet/CANopen distribution box, 1 for 4	TAP-CN02	
	DeviceNet/CANopen distribution box, 1 for 4, RJ45 connector	TAP-CN03	
	3.6V lithium battery (unchargeable) for EH/SA/SX series MPU	DVPABT01	
	Terminal resistance for CANopen communication	TAP-TR01	
	TP Programmer Cable	DVPACAB530	

### Software

Product name	Description	OS (Windows base software)
WPLSoft	Programming software for DVP-PLC	Windows 98, Me, NT4.0, 2000, XP, Vista, Windows 7(32-bit/64-bit)
ISPSoft	Programming software for DVP-PLC	Windows 2000, XP, Vista, Windows 7(32-bit/64-bit)
TEEditor	Editing software for TP series text panel	Windows 98, Me, NT4.0, 2000, XP, Vista, Windows 7(32-bit/64-bit)
PMSoft	Programming software for PM series	Windows 2000, XP, Vista
DCISoft	Delta communication integration software DVPEN01-SL, RTU-EN01, IFD9506, IFD9507	Windows 2000, XP, Vista, Windows 7(32-bit/64-bit)
DeviceNet Builder	DeviceNet configuration software	Windows 2000, XP
CANopen Builder	CANopen configuration software	Windows 2000, XP
DMT	VB, VC, DLL library for DVP-PLC	Windows 2000, XP, Vista, Windows 7(32-bit/64-bit)

### Industrial Power Supply

Product name	Power supply	Inputs	Outputs	Power	Model name	Certificates
				24W	DVPPS01	
				48W	DVPPS02	
				120W	DVPPS05	
				15W	DRP012V015W1AZ	
				30W	DRP012V030W1AZ	
				60W	DRP012V060W1AA	
				60W	DRP048V060W1BA*	
				100W	DRP012V100W1AA	
				60W	DRP024V060W1AZ	
				60W	DRP024V060W1AA	
				60W	DRP024V060W1BA*	
				120W	DRP024V120W1AA	
				120W	DRP024V120W1BA*	
				240W	DRP024V240W1AA	
				240W	DRP024V240W1BA*	
				480W	DRP024V480W1AA	
				60W	DRP048V060W1BA	
				60W	DRP024V060W3AA	
				120W	DRP024V120W3AA	
				240W	DRP024V240W3AA	
				480W	DRP024V480W3AA	
				15W	PMC-05V015W1AA	
				35W	PMC-05V035W1AA	
				50W	PMC-05V050W1AA	
				35W	PMC-12V035W1AA	
				50W	PMC-12V050W1AA	
				100W	PMC-12V100W1AA	
				150W	PMC-12V150W1AA	
				35W	PMC-24V035W1AA	
				50W	PMC-24V050W1AA	
				75W	PMC-24V075W1AA	
				100W	PMC-24V100W1AA	
				150W	PMC-24V150W1AA	
				150W	PMC-24V150W2AA	
				300W	PMC-24V300W1BA	
				100W	PMC-DSPV100W1A (dual output)	

\* [Note] BA series : Removable Terminal Block